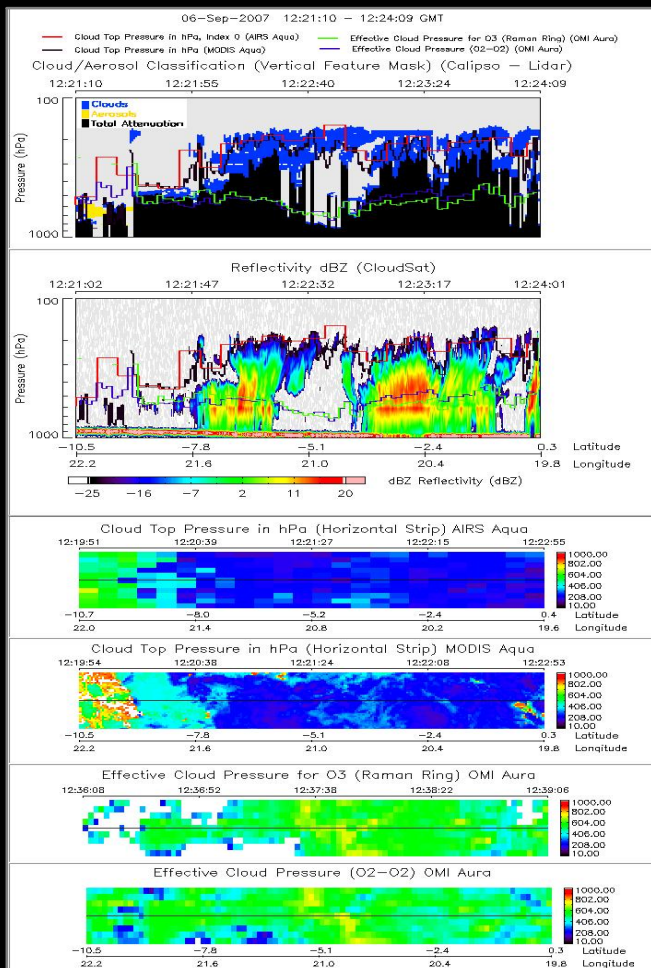
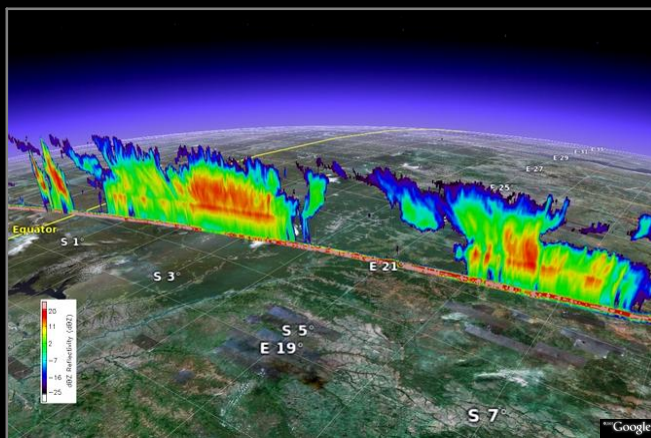


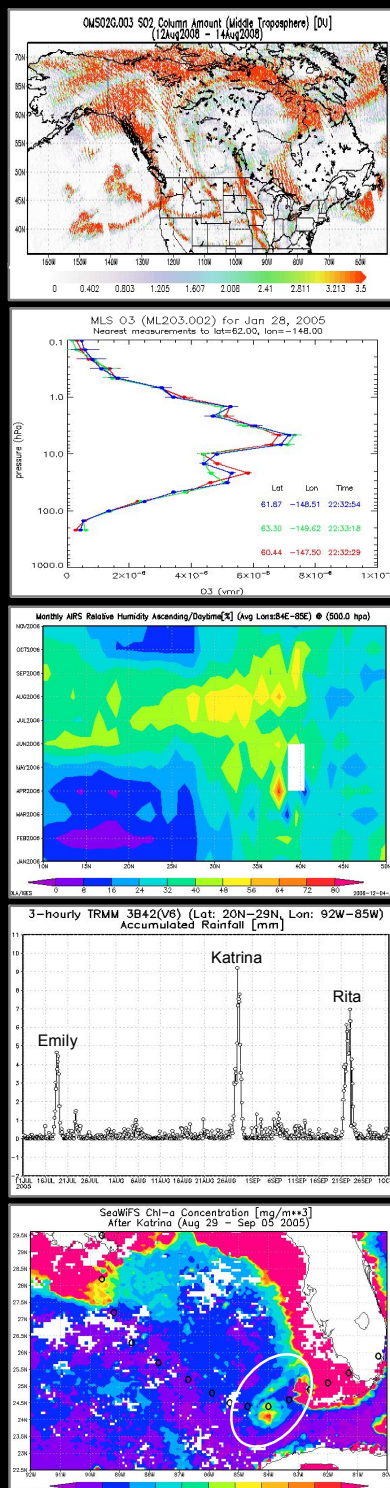
Studying Aerosols, Clouds and Water Vapor Using the A-Train Giovanni Instance



Import Giovanni data into Google Earth



Giovanni: Exploring Air Quality, Hurricanes, Monsoons and more...



OMI Sulfur Dioxide concentration data showing the transport of the Kasatochi volcano (Alaska) eruption cloud over North America, August 12-14, 2008

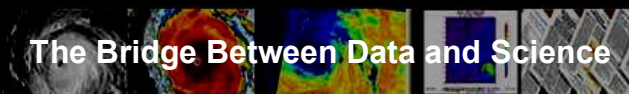
Aura MLS vertical profiles of ozone for January 28, 2005. The secondary ozone peaks below the regular ozone maxima is due to the transport of air of polar origin having a greater ozone content in the lower stratosphere.

Aqua AIRS Hovmöller plot time-latitude cross-section for 500 hPa, showing increased relative humidity over the Tibetan Plateau during the Indian monsoon.

TRMM time-series of 3-hourly accumulated rainfall. The spikes show three of the Category 5 hurricanes, Emily, Katrina and Rita during the 2005 hurricane season in the Gulf of Mexico.

SeaWiFS Chlorophyll-*a* concentration. The plot shows elevated values of Chlorophyll west of Florida after the passage of Hurricane Katrina.

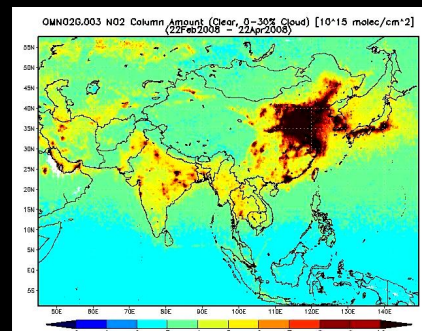
National Aeronautics and Space Administration



The Bridge Between Data and Science

"With Giovanni's data sets and user friendly analysis tools available on the World Wide Web to the whole world, it is possible for an increasing and broader audience to address issues in earth science without having a detailed knowledge of digital image processing and programming techniques."

E-mail from a Giovanni user



Atmospheric NO₂ concentrations over Asia from the Ozone Mapping Instrument, February-April 2008, averaged and plotted with Giovanni

www.nasa.gov

GIOVANNI

About Giovanni

Giovanni is a Web-based application developed by the NASA Goddard Earth Sciences Data and Information Services Center (GES DISC). Giovanni provides a simple and easy way to visualize, analyze, and access vast amounts of Earth science remote sensing data.

Giovanni development is driven by a team of dedicated scientists with many years of experience in multiple disciplines. This ensures that Giovanni always addresses the real-world needs of the science community.

<http://giovanni.gsfc.nasa.gov>

The Power of Simplicity

- Only a **Web browser** is needed.
- **No** need to learn **data formats** and **programming**.
- **No** need to **download** large amounts of data.
- **Customized data and analyses** can be obtained with only a **few mouse clicks**.

Giovanni Features

- Plot Types for Single Parameter:
 - **Area plots** of time-averaged parameters
 - **Time series** plots of area-averaged parameters
 - **Latitude-longitude-time** Hovmöller diagrams
 - **Longitude-latitude-pressure-time** cross sections
 - **Vertical profiles**
 - **Zonal averages**
- Plot Types for Multi-Parameter Intercomparisons:
 - **Area plots** of **overlaid** time-averaged parameters
 - **Time series** plots of area-averaged parameters
 - **Difference** plots
 - **Scatter plots** with **regression**
 - **Temporal correlation** maps
- **Animations**
- **Climatology and anomalies**
- Download formats: **ASCII**, **HDF**, **netCDF**, **KMZ**, **JPG**
- **Web services** for downloading **subsampled** data

Giovanni: Visualization and Analysis of Earth Science Data Online

